

CM WHAT IS CLAIMED IS:

1. A method of preparing polycarbonate by the melt process comprising the steps of:

a) melting a dihydric phenol and a diester of carbonic acid for a time and at a temperature sufficient to form a melt; and thereafter introducing a catalyst composition comprising a tetraorganophosphonium salt or a derivative thereof and

1) an alkali and/or alkali earth metal compound or derivative thereof or

2) a less active alkali and/or alkali earth metal derivative thereof

into the melt; and

b) oligomerizing the product from step a) to a number average molecular weight of from about 3000 to about 7500 ; and

c) polymerizing the product from step b) to a number average molecular weight of from about 16,000 to about 35,000.

2. A method of preparing polycarbonate by the melt process comprising the steps of

a) melting a dihydric phenol and a diester of carbonic acid for a time and at a temperature sufficient to form a melt; and thereafter introducing a catalyst composition comprising from about 1.0×10^{-5} to about 5.0×10^{-4} moles/mol dihydric phenol of a tetraorganophosphonium salt or a derivative thereof and

1) from about 1.0×10^{-7} to about 1.0×10^{-6} moles/mole dihydric phenol of an alkali and/or alkali earth metal compound or derivative thereof or

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2) from about 0.1×10^{-6} to about 5.0×10^{-6} moles/mole of dihydric phenol of a less active alkali and/or alkali earth metal derivative thereof

into the melt; and

5 b) oligomerizing the product from step a) in a two stage reaction system comprising two continuous oligomerization reactors in series, the first oligomerization reactor maintained at a temperature of from about 210°C to about 260°C; the second oligomerization reactor maintained at from about 250°C to about 290°C; wherein the product from the
10 second oligomerization reactor has a number average molecular weight of from about 3000 to about 7500

c) polymerizing the product from step b) in a two stage polymerization system comprising two continuous polymerization reactors in series, the first polymerization reactor maintained at a temperature of from about 285 °C to
15 about 315°C; the second polymerization reactor maintained at from about 280 °C to about 310 °C; wherein the product from the second polymerization reactor has a number average molecular weight of from about 16,000 to about 35,000.

20 3. The method of claim 3, wherein the less active alkali metal salt or derivative thereof is selected from the group consisting of complexes of alkali borate metal salts with EDTA; alkali metal salts of oxo acids of sulfur; alkali metal salts of nonvolatile acids; and alkali or alkali earth metal salts of ethylenediamine tetraacetic acid.

4. The method of claim 1, wherein the dihydric phenol is BPA

25 5. The method of claim 1, wherein the diester of carbonic acid is diphenyl carbonate.

6. The method of claim 2, wherein the dihydric phenol is BPA.

7. The method of claim 2, wherein the diester of carbonic acid is diphenyl carbonate.

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